

## CLAIMS

1 What is claimed is:

1 1. A method for program data transfer reporting; comprising the steps of:  
2 (a) compiling a source program to a platform-independent bytecode;  
3 (b) executing the program, wherein the program passes data implicitly using  
4 pointers;  
5 (c) tracing accesses to memory for generating a trace;  
6 (d) analyzing the trace; and  
7 (e) generating memory use profile data based on the trace.

1 2. A method as recited in claim 1, wherein the accesses to memory relate to load  
2 and store instructions.

1 3. A method as recited in claim 1, wherein the trace includes a map of all memory  
2 accessed during execution of a single function.

1 4. A method as recited in claim 1, wherein the step of analyzing the trace includes  
2 determining where memory transfers take place between domains of a  
3 partitioned system.

1 5. A method as recited in claim 1, wherein the use profile data includes memory  
2 use behavior of portions of the program.

1 6. A computer program product for program data transfer reporting; comprising the  
2 steps of:  
3 (a) computer code for compiling a source program to a platform-independent  
4 bytecode;  
5 (b) computer code for executing the program, wherein the program passes data  
6 implicitly using pointers;

7 (c) computer code for tracing accesses to memory for generating a trace;  
8 (d) computer code for analyzing the trace; and  
9 (e) computer code for generating memory use profile data based on the trace.

1 7. A computer program product as recited in claim 6, wherein the accesses to  
2 memory relate to load and store instructions.

1 8. A computer program product as recited in claim 6, wherein the trace includes a  
2 map of all memory accessed during execution of a single function.

1 9. A computer program product as recited in claim 6, wherein the computer code  
2 for analyzing the trace includes computer code for determining where memory  
3 transfers take place between domains of a partitioned system.

1 10. A computer program product as recited in claim 6, wherein the use profile data  
2 includes memory use behavior of portions of the program.

1 11. A system for program data transfer reporting; comprising the steps of:  
2 (a) logic for compiling a source program to a platform-independent bytecode;  
3 (b) logic for executing the program, wherein the program passes data implicitly  
4 using pointers;  
5 (c) logic for tracing accesses to memory for generating a trace;  
6 (d) logic for analyzing the trace; and  
7 (e) logic for generating memory use profile data based on the trace.

1 12. A system as recited in claim 11, wherein the accesses to memory relate to load  
2 and store instructions.

- 1    13. A system as recited in claim 11, wherein the trace includes a map of all memory
- 2                 accessed during execution of a single function.
  
- 1    14. A system as recited in claim 11, wherein the logic for analyzing the trace
- 2                 includes logic for determining where memory transfers take place between
- 3                 domains of a partitioned system.
  
- 1    15. A system as recited in claim 11, wherein the use profile data includes memory
- 2                 use behavior of portions of the program.

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